An Inaugural Dissertation On Sympathy

Submitted to the examination
Of
The trustees and Medical Professors
Of
The University of Pennsylvania.

By H Bradford

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Preface.

It appears to me, that the object of an inaugural dissertation, is, in some measure, to subserve the purposes of that minute examination, which would otherwise be necessary to determine the qualifications of a young man on the diversified subjects of his profession, the most important to the health and lives of individuals; upon the practice of which he is about to enter: Surely, the best testimony ought to be obtained before he is permitted to engage in that profession.

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the Subject of Sympathy, because, it presents a very wide field to the exercise of reason; but, it will be observed, that I have rarely attempted to controvert any opinion, and that the Subjects of reasoning contained in this paper, as far as I know, are established facts and maxims.

The prolixity, of my essay, will find an apology in the extensive nature and importance of the Subject; for greater brevity was found incompatible — with its developement; and besides, many important questions intimately connected with the Subject, — have been slighted or passed by entirely neglected.

This my first essay will meet with particular indulgence, being composed amidst the hurry of attending lectures; for, I did not know that I should be admitted as a candidate till just before the commencement of the Session; and an attention to such a variety of Subjects, was found to be peculiarly adverse to patient investigation.

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Section II.

It seems proper to commence the consideration of this subject by making some general remarks relative to that harmony which exists in a state of health, and of that general consent which obtains among the various organs of the living animal. Whenever this harmony is subverted to any considerable degree, the part first affected, makes an effort to maintain its integrity by a more, or less vigorous exertion to repel the invader. At the same time the other organs, according to the relations they bear to the injured part, and even the whole system, receives a shock in some instances, and by their affection, they bear a part of the burden of their injured friend. The affection, thus, secondarily excited, no doubt, relieves in some measure, the organ primarily affected; at least we know, that by creating irritation in one part, we not unfrequently relieve another.

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In the course of these observations it will appear, how extensively this principle obtains; not an organ but what is susceptible of associated actions.

We make use of sympathy as a general term, to express a combination of facts, that are palpable to the senses of men: and in the application of this term to particular facts; we say, that, whenever a phenomenon occurs in one part, as consequent to an impression made upon another, this phenomenon is referable to the general term sympathy, accordingly,

In the present state of medical, and physiological knowledge, whenever an appearance is exhibited in any part of the body, upon which no obvious, and direct impression has been made, and especially, if another part has happened to be at the same time affected, or previously diseased, it is said to be accountable for, upon this principle. Therefore,

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material cause in order to explain these facts; for of the existence of this, we have no proof; but, use Sympathy as a generic term, general law, general principle, cause, or ultimate fact, synonymes in Science,‖ for the purpose of arranging under it, a number of particulars having a common analogy. As Monandria is a name for a group of congener plants, so, sympathy is a name for a group of congener facts. This is certainly enough to establish the definition of sympathy, but I shall not in the course of this essay confine myself to this philosophical language, because, in physiology, there is no precedent.

This ultimate fact, now named sympathy, was known to Darwin, and was adopted by him, under the term of sensorial power of association, in order to arrange his diseases of association. Abstracting from his hypothetical speculations concerning the sensorial power, or

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spirit of animation; assuming its existence as essential to the explanation of those diseases; there is contained in his Zoonomia, a more copious and accurate detail of facts, referable to the term Sympathy, as now used, than is anywhere else to be found.

SECTION. III.

Circumstances essentially connected with the taking place of Sympathetic phenomena.

At one time it was supposed, that Sympathy was dependent upon a direct communication by means of blood vessels, between the sympathizer, and the organ primarily affected; thus that connection, which exists between the Uterus and mammæ, was supposed to be connected with an anastomoses of the branches of the epigastric, and mammary arteries; but

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this opinion is no longer supported. But, still, as far as I know, the heart and arteries are absolutely essential to the existence of the animal, and as sympathy is a combination of living phenomena, they are, that is, the heart & arteries are as essential to sympathy, as they are to vitality.

Next, the direct communication of nerves, by which was meant, that in order for two parts to sympathize with each other, it was necessary, that they should both receive nerves from a common branch, or from a common ganglion, or that nerves should pass through one, directly on to the other. But, it has been, by more recent discoveries determined, that no particular distribution, of nerves, is at all connected with these appearances. "For, of the manner in which impressions are extended, as well as of the cause of the more intimate consent of parts, we are not perhaps accurately —

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informed. It would seem, however, that in neither case is it to be exclusively referred to the mediation of nerves, as is commonly supposed. Those sympathies which prevail among the various viscera of the abdomen, and between them and the head, neck, and contents of the thorax, may be explained with sufficient probability, by the extensive anastomoses of the intercostals with almost all the nerves which proceed from the spinal marrow. But, there are many other sympathies, not less conspicuous, between parts, the nerves of which have not the slightest connection;"

I have made this quotation as exhibiting my sentiments, very accurately, on this point. — Though, I assent, wholly, to the opinions delivered in the last paragraph, yet the same observation should be made respecting the nerves, that was, formerly, made

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respecting the arteries, that is, "they are as essential to sympathy as they are to vitality" indeed, they appear to be more intimately connected with these phenomena, than any other circumstance of structure.

From the definition which was given of sympathy, in a very early part of this investigation, it may be collected, that I shall make no attempt to discover the cause of those phenomena, called sympathetic. Yet, the fact should be mentioned, which is made evident to our senses, by experiment, that, it is thro' the nerves that this influence extends; but to ask how, or in what mechanical manner, would certainly be a very contemptible question. This section is intended to detail some circumstances of anatomical structure, which I conceive to be essentially connected with sympathetic phenomena. I shrink from the attempt to determine what circumstance most constantly attends them. It would involve an endless discussion,

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Section. IIII.

Of sympathetic phenomena, and of some circumstances attending them.

It is asserted by a respectable writer, "that both the sound, and morbid states of the system, present numerous instances of these associated actions, some of which are constant, and uniform, while others are occasional, and anomalous, produced as it were accidentally."

Notwithstanding this assertion, we are amply satisfied, from our researches on this subject, that by far the greater majority of instances, which do occur, proceed originally, either from an unusual or morbid impression, and that instances of these phenomena are comparatively rare in a perfectly sound & healthy condition of our economy. At least this we certainly know, that some very great

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physiologist,* in treating of sympathy as a law of the animal economy, have adduced a number of individual facts, in proof of its existence, and in illustration of its nature, all of which facts, are phenomena, occurring as consequences of diseased impressions. Yet I am very far from asserting, that such instances never do occur, in a perfectly sane, and healthy condition of the body; but those occurring in conception, alone suggest themselves to my mind at this time.

But of their universal occurrence in the morbid states of the system, no one, who has just views of therapeutics, or pathology, can at all doubt: for no part can be injured to any considerable extent, without drawing after it a train of associated actions. Having made these preliminary remarks, I shall proceed immediately to the consideration of sympathetic phenomena.

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1st The sympathetic phenomena may be exhibited by an organ, that extends to every part of the body, or may appear in every organ of the animal economy, as in sympathetic fever from wounds, where the whole arterial system is affected, and in hectic fever, where almost every function is more, or less affected; in these cases the sympathy may be termed universal.

2d. The sympathetic phenomenon may be exhibited by an individual organ: this may be called partial.

This may again be divided into remote, contiguous, and continuous, according to the relative situation of the sympathizer, with the organ primarily affected.

These are the sentiments, though not the words of Mr Hunter. It appears that this division is not founded upon any essential difference in the nature of those phenomena; but upon first, their universality, and, second, upon the relative situation of the affected organs. I shall give numerous instances of these in another place.

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3d The sympathetic phenomenon may be an action of muscular parts, both of the locomotive, and of those that are more immediately concerned in the functions of life: as in tetanus from any cause, epilepsy from morbid conditions of the digestive organs, and in all spasmodic, and convulsive diseases. Again, instances of sympathy as showing itself in action of vital organs, may be observed in that commotion of the pulse, which is present in a great many diseases.

4th The sympathetic phenomenon may be a sensation of the body; as the pain felt at the point of the shoulder in inflamation of the liver; the nausea attendant upon the operation of an emetic; the pain in the knee, from diseases of the hip joint; the general uneasiness attendant upon the paroxysms of all febrile diseases; itching of the glans penis, from stone in the bladder; pain in the parietal bone, from carious tooth; irritation, or itching at the top-

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of the larynx from diseases of the lungs. Next, the faculties of the mind may be deranged, from an impression made upon the stomach; as in mania, which, frequently, has its first link in the stomach. Also, the passions, and affections of the heart, may be very much altered, and modified from diseases of the body. Cullen mentions the want of attention as a symptom of fever.

5th The sympathetic phenomenon may be a change of temperature; as seen in the morbid heat of the skin, in the hot, and its diminished temperature in the cold stages of fever. It is I believe, now, very generally contended, and by a great number acceded, that though the production, of animal heat, may be, in some measure, influenced by chemical laws; yet, at the same time it is controlled by the vital powers, in the same way, that they control the secretion of urine, bile, tears, and saliva.

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therefore, the production of heat may be influenced, as well as these secretions, by that law of the animal economy, called sympathy, This may be thought for the reason last given properly to belong to ours,

6th Species, which is, that the sympathetic phenomenon may be a secretion, which, it might again be urged, presupposes action; but in this case I regard only the fluids secreted, which are often exhibited to the senses, an an attention to which, is very important to the practitioner of physick. Instances of this species will be found in the copious flow of urine, succeeding to the administration of strong diuretics; the great discharge of saliva, produced by mercury, and by chewing acrid materials; in the flow of tears from the introduction of foreign substances into the eye, and many others might be named. Here, let it be observed, that the circumstances, attending these, relate to their color

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their quantity, and other sensible properties. Before leaving the subject of secretion, it is absolutely necessary for the full elucidation of the subject, to say something of the action, or the process, by which these secretions are formed, for, as yet, we have only considered secretions as a fluid.

It is admitted, as far as I know, on all hands, that the sensibility, of every part, is exactly adapted to the nature of the fluid, that it was destined to contain: so, that if an injurious substance, be presented to the lacteals, of the intestines, they will either obey the general law of the animal economy; that is, of endeavouring to expel it, or else, by assimilating it, to the nature of its proper fluid, chyle, admit it: thus, there seems to be an affinity between the sensibility of the lacteal extremities, and that particular combination called chyle, and this sensibility selects-

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to appropriate fluid from the heterogeneous mass of aliments, (I do not mean by chemical, or capillary attraction) just as sulphuric acid selects Barytes, from a mass of other principles. This might properly enough be called, organic, or animal attraction; and is modified in the different organs of secretion. It is stated that the vasa biliarii proceed laterally from the extremities of the vena portarum, the extremities of these vasa, are, no doubt, the organs that secrete bile, and they select from the blood by their specific sensibilities, bile only, just as the lacteals do chyle. In this way I would explain all the secretions. For though chemical analysis cannot discover bile in the blood, nor can capillary attraction; yet this specific attraction named above, (⊙ I.E. organic) does we know select from the blood, the animal compound called bile; and, so, of all the secretions. I mentioned this to introduce the fact, that such is the

⊙ An instance of this may be seen on a larger scale in the pylorus admitting to pass only the digested chyme.

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influence of sympathy, through the medium of the nerves over this process, that it, sometimes, changes the sensibility of one part, into that of another; for it is upon record, that urine has flowed from the mouth, and from under the arms: besides, it alters, very much, the sensibilities of every part, giving rise to preternatural, and morbid secretions.

7th — The sympathetic phenomenon may show itself in redness, swelling, and tumefaction. We have mentioned sympathetic phenomena, as they occur, individually. It may be said that the mention of all these particulars, can be of no use; but the animal economy cannot be presented in any light, but that it will be ultimately of advantage, provided, too, that the writer confines himself, as I hope I have done, solely to the delivery of facts & analogies. It may be urged, too, not without seeming plausibility, that there is no regularity

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in the occurrence, and succession of sympathetic phenomena in any case; but the force of this objection may be obviated, by attending to what will be said, when I come to the consideration of primary impressions, where it will appear, that some regularity, and constancy is observed in the occurrence of these phenomena.

What have been called trains of associated actions, may be made up of those particular phenomena, which have been mentioned, thus, a train may be made up of pain, increased action, change of temperature, &c, &c. But, it is certainly useless to give examples; they may be observed in almost all diseases of any violence, they succeed also, to the administration of medicines and poisons: and it is a fact, that they do, in these cases, observe some regularity of appearance.

I shall next proceed to the consideration of primary impressions.

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Section. IV.

Of the nature of primary impressions, as discoverable from the phenomena that succeed to them.

Having mentioned the sympathetic phenomena, and given, as I believe, a tolerably clear, and faithful exposition of them, and of some of the important circumstances attending them; I shall proceed to give all I know, of primary impressions, or links, as they may sometimes be called.

That the appearances mentioned in Section 3d always suppose a preexistent, or present impression, every tyro in philosophy will inform us, by adverting to the long established axiom, "that every effect must have a cause" and especially as I am one of those, who admit the testimony of the senses; I mean that

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though there may be a principle of life, independently existent; yet for the production of the phenomena of life, the application of food, or of some other stimuli, is essentially necessary.

Then; primary impressions may succeed to the direct application of foreign agents to the body, yet it must be confessed, that their application is not always very obvious.

Sometimes the presence of pain points out the seat of this impression, yet, very frequently we come at its existence only by attending to the sympathetic phenomena, that have been mentioned; and sometimes only by dissection.

It was at one time supposed, that the application of active agents to the human body, of whatever kind, was succeeded, either simply by an increase or diminution of action in the part, to which it was made; or according to the diffusibility, or permanency of the operation of the agent, was succeeded by a more uni-

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versal or permanent increase, or diminution of action: by which was meant, that the arteries were the most important apparatus of the machine, and that the whole circle of vital phenomena, whether of health, or of disease, consisted, alone, in the greater, or less contraction, and dilatation of the arteries, and heart,

But, I shall attempt to prove by a sufficiently copious induction, and comparison of sympathetic phenomena, that this is as untrue of disease, as it is of the application of medicines.

Thus, if the opinion to be controverted were true; then the violence, and danger of sympathetic affections, ought to be in exact proportion to the nearer approach of the primary one, to inflammation, which by the same doctrine was supposed to be a case of simple augmented action: but this is not the case; for example: An affection of the stomach,

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not amounting to pain, will induce a train of sympathies, that do, sometimes prove fatal, independently of the primary impression, as in apoplexy, and also, in low grades of fever: while in gastrites, where actual inflammation exists, even to acute pain, which by their doctrine ought always to be fatal, does frequently recover. It appears proper, here, to mention the fact more explicitely, that sympathetic affections do, sometimes, themselves become the cause of death, as in apoplexy. Besides, these have a tendency to continue when once excited, and like inert matter, which has a tendency to continue in the state in which it is placed, whether of motion, or rest, and when projected would continue forever, were this tendency not overcome by gravitation, and atmospheric resistance; and thus, also, an action excited in the system, has a tendency to continue, till arrested by the powers of the system. I have mentioned this fact,

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not, because it furnishes an important practical precept, that the sympathetic affections should not be lost sight of in curing diseases, by paying too much attention to the seat of a disease; but I mentioned it, because, it was important in illustration of the fact that we may observe by attending to the sympathetic phenomena, whether succeeding to the application of the causes of disease, or of medicinal agents: and thus derive a strong proof, that the opinion, which supposes, that the actions excited in the animal body, by the causes of disease and by medicines, consist entirely in what is discoverable in the physical properties of the pulse, is futile and erroneous.

I say, by a patient attention to the infinitely diversified trains of phenomena, which constitute disease, and, of those which succeed to the application of medicinal, and poisonous agents to the animal, whether for experimental, or remedial purposes; we have the most incon-

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trovertible evidence, of the truth of the proposition; that there is something sui generis, in the impressions made by different medicines, and, that they do not produce effects that are alike. But a very important argument, is, that precisely the same effects of one, cannot be obtained by any mode of exhibition of another, even, very often, those of the same class, much less those of different classes; hence, I conclude, that the primary impressions which precede sympathetic trains of actions, have, in every case, where these trains are constantly observed to differ, something peculiar in the nature of the impressions themselves. And as secretion cannot be accounted for, by operation of vessels, upon the blood, considered simply as propelling, contracting and dilating tubes; so, also, the operation of medicines on the secretions, cannot be explained upon the same data; hence some influence must be communicated from the primarily affected organ, by the nerves,

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Thus, too, mercury applied to the Stomach; by the specific connection, between its impression, and the Sympathy of the Salivary glands, the secretion, of these last, are wonderfully affected; hence, it is not true, that the primary impression, consists entirely, in an augmented, or diminished action of the part, to which the Substance is applied; nor do the Sympathetic impressions, consist, alone, in a more extended augmentation, or diminution of action.

From what has been said, there may be deduced some general division of primary impressions, in the same way, that a division was attempted of Sympathetic phenomena.

Thus the primary impression may be specific, as has been shewn: individuals, of this general division, may be deduced from a consideration of the trains of phenomena, succeeding to the application of the causes of disease,

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But it must be mentioned, that the symptoms of the primary impression, modified exceedingly, by the state of the whole, or of an individual organ of the body; thus the same affections of the stomach, will in one be followed by apoplexy, by another with mania, in another by hemoptysis &c &c.

Again, the primary impression does in some cases, seem to consist entirely in an increased action of the part, in which it shows itself, such is not only the case, with many of the idiopathic affections; but also of many of the sympathetic ones;

From these speculations, it has, I hope been made sufficiently obvious, that in a great many cases, the nature of the primary impression ~~of~~, is only discoverable, by an attention to the sympathetic phenomena, which succeed them, for the part, to which the application, is made, is not often obvious to the senses.

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Section V.

Of particular sympathies, and of some circumstances attending them.

I have hitherto confined myself, to reasonings, concerning the general nature of sympathetic phenomena, and of primary impressions, and also, to the establishment of some general facts to which they evidently lead. The next subject that seems to claim attention, is a detail of those particular sympathies, which are observable between the various organs of the animal economy.

It appears to me, that the heart, and arteries, sympathize the most readily with every other part of the body; but,

That every other part, as well as the heart, and arteries themselves, sympathize the most readily with the stomach. But, these

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propositions demand some further illustration. Thus, I have seen a case of what was called tubercular consumption, which when excited into action by exposure to cold, and wet, was attended with loss of appetite, and other symptoms indicating an affection of the stomach; but as the complaint advanced, and became confirmed, the patient recovered his appetite, and, as far as I know, his powers of digestion; yet, the heart, and arteries exhibited signs of derangement through the whole course of the disease. Again, slight affections of the liver, probably on account of the connection existing between this organ, and the stomach, and of the very intimate one between the brain, and the organ last named, are often attended by violent head ache, yet, violent affections of either of the former organs, are rarely attended with any very remarkable sympathetic affection of the brain. Indeed,

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there are not wanting numerous instances, where a slight affection is succeeded by a train of violent sympathetic actions, yet these cease entirely, when the primary impression becomes violent, or confirmed. Thus, the relations, between the organs of the body, seem to bear some analogy with the relations of mankind, in a moral, and social point of view; for if a fellow creature have suffered only slightly, by the cold hand of adversity, he still retains numerous friends, and assistants; but if he become overpowered by the weight of misfortune, he is at once abandoned, his situation excites, neither sympathy, nor assistance. But to return to our subject.

That the stomach does in some instances abandon its connection with parts, in a limited point of view, while the arteries retain theirs to the last, cannot be doubted. Hence it is certain, that the propositions laid down in the

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early part of this Section, do Sometimes obtain, But, I will not generalize too much, by asserting that they obtain universally, though not many objections at this time, suggest themselves.

Though I believe, the two propositions, laid down in the Second, and third paragraphs of this Section, to be true in many instances, and consequently, that the Sympathetic connection of parts, is not reciprocal; yet as a general fact it may be stated, as our,

1st Proposition "that the Stomach is possessed of infinitely the quickest Sensibility to action, and of the most intimate, and multiplied relations. No viscus or organ, not even the brain itself, can be compared to it, in this respect, or which occupies so important a station in the animal economy."⊙ In proof of this, it has been stated, that it has never been found absent in any animal, while all the other important organs, have occasionally

⊙ Chapman

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been wanting. But, I place very little stress upon this fact, compared with others I shall adduce. Thus it appears, from the doctrines of the day, that a vast number of diseases, indeed have their seats in this organ, and many that we formerly considered as idiopathic affections of other organs. Besides, the stomach is more or less affected, in all the diseases of other parts.

It receives, also, a very important confirmation from the fact, that it is a medium thro. which a great majority of our most important remedies operate. This fact, certainly, if abstractly considered, places this organ, in a very important point of view, in the cure of diseases. It is also important as being the principal organ concerned, in the digestion of the food; not to mention the great improvements, that have resulted to the practice of medicine, by viewing the stomach in this important light.

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2d. The bowels as a continuation of the alimentary canal; and important in a physiological point of view, seem, also, to possess a very intimate connection, with the general health and many of the individual organs of the body. Thus, costiveness, alone, has been known to produce a violent cough, and hæmoptoe, (I know it did in my own case) it has also produced palpitation of the heart, which were both relieved by cathartics. Every physician can attest the importance of this class of medicines.

3d. The cutaneous surface possesses a very important connection by sympathy, with the body generally, and particularly, with the stomach. It has been said, too, to be intimately connected in this way with the kidneys.

Many diseases are supposed to take place in consequence of impressions made upon this surface, by cold: and many medicinal ap-

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plications are usefully made to this organ, in the treatment of diseases. Notwithstanding the important point of view, in which, these considerations place the skin; we are, I think, warranted in saying, that these very considerations have led to many errors in theory, as well as in practice: As an example, I shall only mention, that by the theory of Cullen, which is now nearly exploded, the state of the skin was more particularly attended to, than any other symptom of fever; yet I have known very respectable practitioners, of physick, visit patients in these diseases, and prescribe for them without attending to the skin at all.

It is strange, indeed, how much the prevailing theory of fever, has withdrawn the attention of physicians from the skin.

4th The heart, and arteries, as was casually mentioned, seems to possess the most exquisite sensibility to the sympathetic influence, communicated from diseases of other parts. The very

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important light in which physicians hold these will appear, when we consider, that almost the first thing they do, when called to a patient, in all diseases, is to feel the pulse: and certainly it is very important. But, yet, I think, that the information derivable from this source, and the importance, that has been attached to that information, have been exceedingly exaggerated. Thus, Doctor Rush considered the pulse as "the dial plate of the system." He, also, considered the proximate cause of fever, to consist in a convulsive action of the arterial system: and if I am not very much mistaken, he hoped, that the time would arrive when an attention to the pulse, all the other symptoms of fever, would be lost, in the concentration of our attention to the pulse alone. That the arterial system would furnish us with all the necessary information.

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high authority, did I not observe, that this opinion, at this time, has very few advocates in theory, and not one in practice. I believe, that the pulse, considered abstractly, is not to be depended on; but must be connected, in view, with ~~with~~ the derangement of other functions.‡ Still, on account of the close sympathetic connection between these organs; namely, the heart, and arteries, and the stomach, every thing should be attended to, that will, in any way, throw light on the condition of the latter. Here, I beg leave to dwell a little on this point, as it is intimately connected with, and will throw much light on the subject of sympathy. As I think, that the prevailing opinions, on medicine, have strangely withdrawn the attention of physicians from the pulse; let it be observed as a well established fact, applicable in numerous instances, that the derangements of parts sympathetically

‡ See Fordyce on fever

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induced, may themselves become the causes of death, though the causes producing the primary impressions may have been removed. And besides, that they have a tendency to continue.‖ Thus, we see, that the opinion is held by high authority in medicine, that a derangement, in the Stomach, does, not unfrequently, give rise to apoplexy; yet, patients do appear to be carried off by this Sympathetic derangement; for the State, of the Stomach, which precedes many of these attacks, is sometimes so slight, as not to attract much attention.

The general facts above established may apply exactly to the blood vessels in fever. For though the cause, whatever it be, may exist in the Stomach; yet the Sympathetic action, of the arteries, may be so violent, as to become a source of danger. Nay, it runs so high, locally considered as to produce mortification, hence, a very careful atten-

‖ Burns on inflammation.

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tion to the pulse, is of the very last importance. This will not be thought a digression, when it is considered, that those circumstances attending Sympathy are hereby illustrated, namely, that they may become the source of danger, and death.

5th The organ of Smell it is said "has a considerable Susceptibility, and maintains a very extensive connection with the system generally." # and certainly the arguments adduced in favour of this opinion, are worthy of the highest consideration.

I shall next consider a few particular Sympathies, that appear to be more partial in their nature. But a great number, of these, has been given in the section on Sympathetic phenomena; I shall therefore consider only a very few in this place.

The brain sympathizes very readily with the stomach. But independent of this par-

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ticular connection, the brain considered, as constituting a part of the nervous System, must be considered, also, as concerned in, at least, a great many of the sympathies of the body: For many parts sympathize with one another, where there is not the slightest connection by nerves, except through the medium of the brain. How far the anastomoses, of nerves through the medium of ganglions, will explain some sympathetic phenomena, I shall not attempt to determine. But, certain it is, that, that harmony which was said to exist in a very early part of this investigation, between the various organs of the body, is maintained by means of the nervous System: hence, this System is engaged in every particular sympathy; hence, too, this System may itself become the peculiar seat of sympathy; but these affections show themselves only in the phenomena that have been mentioned. See Section 3d.

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The tongue has a very particular connection with the Stomach: and this is important to be known; for as a general remark, it is viewed as an index to the Stomach, the most important organ of the animal economy, and is very much attended to by physicians.

The extremities of canals, seem to possess a connection with the cavities, to which they lead, many instances of which have been named.

Though I have said, that the Stomach is connected very intimately by sympathy, with every other organ of the body, and they again with it; yet it is most evident, that relations do exist after this manner, between other organs, without the intervention of the Stomach, viz. the Stomach does not appear to be concerned in those instances of sympathetic phenomena mentioned in the last paragraph. Although this

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last assertion be true; yet sympathies do sometimes obtain, between distant organs, only through the medium of the stomach.

Many important points, intimately connected with my subject, have been very much slighted, and many have been entirely neglected. I will not lengthen these speculations, that have been carried already too far perhaps. And besides, those, to whose examination they are submitted, are so perfectly acquainted with ~~with~~ all these subjects, that they cannot be much amused, certainly not instructed, by these crude speculations of mine. I shall, therefore, make a conclusion.

Conclusion

At a first, and superficial view of this subject, it might be alledged; the doctrines

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of Sympathy teach nothing; So far as they are carried by their advocates, to the explanation of disease, as well as of the operation of medicines: That while other theories give a full, and satisfactory solution of these phenomena, the doctrines, of Sympathy, amount only to a confession that they are inexplicable, Viz, that in the process of conception, they only say, that the semen being applied, in coitu, to the surface of the vagina, all the changes which take place, only follow this application, without telling how they are brought about. Now this is certainly telling the truth: for have we any sufficient proofs that the semen is in any way applied directly to the ovaria, there exciting it to life by contact ~~&~~, like a blister excites inflamation?

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sympathetic phenomena, and of primary impressions, I think we are warranted in saying, that hitherto, the objects of nosological arrangement, have consisted in a great part of ~~of~~ sympathetic phenomena. And numerous proofs may be collected from Fordyce, and others, that all these may mislead, i.e. the tongue, the pulse, the state of the skin &c. may all err, in the information they give; hence two conclusions follow

1st That none of them should be neglected, and no one exclusively depended upon,

2d That the knowledge of the seats of diseases, is very important to be known.

For certainly a knowledge of those things that have been just mentioned, together with just ideas of sympathy, have not only effected an important improvement in the treatment of fever, but, also, in the treatment of many other diseases.

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I do, therefore, hail the establishment of those doctrines, as a new era in medical science. They teach how far we are capable of going in the explication of diseased phenomena as well as the operation of medicines. Finally (excuse my enthusiasm) like gravitation in natural philosophy, and the doctrines of Reid, and of Stewart in Pneumatology, the doctrines of Sympathy have cleared the apartments of medical Science of a great deal of Specentation, of a vast heap of useful rubbish "namely, "the jargon of the Schools."